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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/639,082	08/16/2000	Kazuhito Ohashi	35.C14706	3066

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EXAMINER

AGGARWAL, YOGESH K

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/639,082	Applicant(s) OHASHI, KAZUHIITO	
	Examiner Yogesh K Aggarwal	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,9,30,33 and 37-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,30,33,37-39,41,43 and 44 is/are rejected.
- 7) ☐ Claim(s) 5,9,40 and 42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Applicant's arguments with respect to claims 1,3, 4-6, 9, 30, 33, 37-44 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 4, 6, 30, 33, 37-39, 41, 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nabeshima et al. (US Patent # 6,330,083) in view of Kawai (US Patent # 6,034,789).

[Claim 1]

Nabeshima teaches an image input apparatus (figure 1) comprising a photoelectric conversion unit (6) adapted to acquire image information of an object from a plurality of divided areas (figure 6a, element 51) and to output signals from each of a plurality of output units (52 and 53) corresponding to respective ones of the areas (col. 7 lines 1-11). The claim is broadly read as each of the areas including an effective pixel portion to be the signal level and a non-image pixel portion to be the black level (col. 7 lines 43-48). Nabeshima also teaches a correcting unit (28) adapted to correct offset components contained in the signals output from each of the output units during a period of acquiring the image information (col. 11 lines 6-14, the offset

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components are corrected during a read operation which occurs when the image information is being acquired). Nabeshima fails to teach explicitly that the offset components are corrected in accordance with a first signal output from the effective pixel portion during a period other than the image information acquiring, a second signal output from the non-image pixel portion during the period other than the image information acquiring and a third signal output from the non-image pixel portion during the period of acquiring image information. However Kawai teaches a control unit 10 (figure 1) used for offset adjustment for an image reading circuit as shown in figure 4a and 4b (col. 6 lines 17-20). The lamp is turned OFF during step S103 (Col. 6 lines 30-33). Then in step S104, the image signal A (which is a image signal is read, col. 5 lines 2-4, col. 6 lines 35-38) and therefore reads on a first signal output from the effective pixel portion during a period other than the image information acquiring. In step 105, the mean black output sample is readout (col. 6 lines 38-40) and therefore reads on a second signal output from the non-image pixel portion during the period other than the image information acquiring. After the offset adjustment is done based upon these two signals, the control unit 10 performs a gain adjustment in step S115 that is explained in detail in figure 5a and 5b (col. 8 lines 20-27). The control unit turns on the lamp, which has been off in step S1010 and the peak black value collecting operation is done (col. 8 line 56-col. 9 line 26) and therefore reads on a third signal output from the non-image pixel portion during the period of acquiring image information. Therefore taking the combined teachings of Nabeshima and Kawai, it would have been obvious to one skilled in the art at the time of the invention to have been motivated to include offset component correction means in accordance with a first signal output from the effective pixel portion during a period other than the image information acquiring, a second signal output from the non-image pixel

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portion during the period other than the image information acquiring and a third signal output from the non-image pixel portion during the period of acquiring image information. The benefit of doing so would be to perform an image reading apparatus, which is capable of performing the offset correction in an efficient manner and with a simple structure.

[Claim 3]

Nabeshima teaches in figure 6A disclose the charges from the plurality of areas being output separately to right and left directions.

[Claim 4]

Nabeshima teaches that the CCD has wide variations in characteristics due to a variation of components and the sensitivity variations (col. 7 lines 12-15).

[Claim 6]

Official Notice is taken of the fact that it is notoriously common wherein the first, second, and third signals are obtained through addition of signals of the areas and averaging. Therefore taking the combined teachings of Nabeshima, Kawai and Official Notice it would be obvious to one skilled in the art at the time of the invention to have been motivated to have first, second, and third signals being obtained through addition of signals of the areas and averaging in order to have the correction of the offset components for the entire frame.

[Claims 30 and 33]

These are method and stored program implementing the method claims corresponding to apparatus claim 1. Therefore, claims 30 and 33 has been analyzed and rejected as previously discussed with respect to claim 1.

[Claim 37]

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Nabeshima teaches an image input apparatus (figure 1) comprising a photoelectric conversion unit (6) adapted to acquire image information of an object from a plurality of divided areas (figure 6a, element 51) and to output signals from each of a plurality of output units (52 and 53) corresponding to respective ones of the areas (col. 7 lines 1-11). The claim is broadly read as each of the areas including an effective pixel portion to be the signal level and a non-image pixel portion to be the black level (col. 7 lines 43-48). Nabeshima also teaches a correcting unit (28) adapted to correct offset components contained in the signals output from each of the output units during a period of acquiring the image information (col. 11 lines 6-14, the offset components are corrected during a read operation which occurs when the image information is being acquired). Nabeshima fails to teach explicitly that the offset components are corrected in accordance with a first signal output from the effective pixel portion during a period other than the image information acquiring, a second signal output from the non-image pixel portion during the period other than the image information acquiring and an average of the second signal.

However Kawai teaches a control unit 10 (figure 1) used for offset adjustment for an image reading circuit as shown in figure 4a and 4b (col. 6 lines 17-20). The lamp is turned OFF during step S103 (Col. 6 lines 30-33). Then in step S104, the image signal A (which is a image signal is read, col. 5 lines 2-4, col. 6 lines 35-38) and therefore reads on a first signal output from the effective pixel portion during a period other than the image information acquiring. In step 105, the mean black output sample is readout (col. 6 lines 38-40) and therefore reads on a second signal output from the non-image pixel portion during the period other than the image information acquiring. Kawai also discloses a mean (average) black output (col. 6 lines 39-40). Therefore taking the combined teachings of Nabeshima and Kawai, it would have been obvious

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to one skilled in the art at the time of the invention to have been motivated to include offset component correction means in accordance with a first signal output from the effective pixel portion during a period other than the image information acquiring, a second signal output from the non-image pixel portion during the period other than the image information acquiring and average of the second signal. The benefit of doing so would be to perform an image reading apparatus, which is capable of performing the offset correction in an efficient manner and with a simple structure.

[Claims 38, 39, 41]

See claims 3, 4, and 6.

[Claims 43, 44]

These are method and stored program implementing the method claims corresponding to apparatus claim 37. Therefore, claims 43 and 44 has been analyzed and rejected as previously discussed with respect to claim 1.

Allowable Subject Matter

4. Claims 5, 9, 40 and 42 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: As for claims 5 and 40, the prior art does not fairly suggest or disclose wherein said correcting unit includes a subtracting unit adapted to subtract the offset components from the signals output from the plurality of areas of said photoelectric conversion unit during the period of acquiring the image information; a calculating unit adapted to calculate the fluctuation of the offset

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components in accordance with the second and third signals; and an adjusting unit adapted to adjust the offset components to be subtracted by said subtracting unit, in accordance with an output signal from said calculating unit.

5. Claims 9 and 42 are dependent upon claims 5 and 9 respectively.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yogesh K Aggarwal whose telephone number is (703) 305-0346. The examiner can normally be reached on M-F 9:00AM-5:30PM.

7. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on (703) 308-9644. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YKA
December 28, 2004


TUAN HO
PRIMARY EXAMINER